

REMARKS/ARGUMENTS

Claim 23 is amended. Claims 1-16, 32, 33 and 36 are cancelled. Claims 37-54 are withdrawn. Claims 55-140 are added. Claims 17-31, 34, 35, and 55-140 remain in the application.

Applicants hereby request further examination and reconsideration of the application in view of the foregoing amendments and discussion below.

Original dependent claim 23, which depended directly from independent claim 1, has been rewritten as an independent claim, incorporating all of the features of cancelled claim 1. One member of the claimed Markush group, "an arcuate barb base", is deleted.

New claims 91, 100, 109, 118, 127 and 134 correspond to claim 23, with the members of the Markush group expressed as independent claims. Dependent claims 92 and 93 correspond to original claims 24 and 25. Dependent claims 101 and 102 correspond to original claims 26 and 27. Dependent claims 110 and 111 correspond to original claims 28 and 29. Dependent claims 119 and 120 correspond to original claims 30 and 31.

Claims 17-22, 34 and 35 are allowed.

Claims 23-31 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 5,931,855 Buncke, or in the alternative, obvious over Buncke in view of U.S. Patent No. 5,123,911 to Granger. The examiner states that Buncke discloses a suture/suture needle combination having the suture swaged to the needle, and barbs in a staggered or spiral arrangement. The examiner notes that the figures in Buncke show the proximal end of the needle about the same diameter of the suture. The examiner relies on Granger "...in the event that neither of these readings of the disclosure is found to adequately disclose the claimed diameter ratio..." The examiner states that Granger discloses in col. 7, lines 13-21, that it was known to attach sutures of equal diameter to the suturing needle. The examiner concludes it would have been obvious to have made the suture diameter at least as large as that of the needle, in order to provide a strong suture and one which easily traverses through the tissue.

Claims 23-31 are also rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 3,123,077 to Alcamo in view of Granger. The examiner states that Alcamo discloses a barbed suture having overlapping, spirally arranged, irregularly or regularly spaced [barbs] about the suture. The examiner correctly notes that the claimed attachment to a suturing needle and the claimed ratio of the diameters are not disclosed by Alcamo. The examiner relies on Granger, col. 7, lines 13-21, to contend that it was known to attach sutures of equal diameter to the suturing needle. The examiner concludes it would have been obvious to have made the suture diameter at least as large as that of the needle, in order to provide a strong suture and one which easily traverses through the tissue.

Applicants' attorneys gratefully acknowledge the interview granted by the examiner on December 8, 2005. Claims 1 and 23 were discussed. Note that this differs from the Interview Summary which incorrectly indicates claims 1, 32 and 33 were discussed. The prior art

discussed relative to the claims was Alcamo, Granger, and Buncke. With respect to claim 1, the claimed ratio of the needle to suture diameter was considered. An amendment was suggested wherein the claimed ratio would be recited as a range between about 3:1 and about 1:1. The examiner noted that consideration of the amended claims would include confirmation that the amendment is supported by the specification. Claim 23 originally depended from claim 1 and recites various barb geometries as a Markush group. Applicants' attorneys questioned the prior art basis for the rejection of claim 23 and dependent claims 24-31. The examiner explained the rejection is in primarily view of Alcamo, which he believes shows barbs with an arcuate base and that one would expect an arcuate base when cutting a barb into a round suture body as shown in Alcamo.

The Applicants respectfully submit that claim 23, as amended, patentably distinguishes from the cited references. Claim 23 defines a barbed suture attached to a surgical needle, wherein the suture comprises a plurality of barbs projecting from an elongated body and a ratio of the surgical needle diameter to the barbed suture diameter of about 3:1 or less. Claim 23 recites, *inter alia*, barb configurations selected from the group consisting of (i) a barb cut angle θ , (ii) a barb cut depth, (iii) a barb cut length, (iv) a barb cut distance, (v) a corrugated barb underside, (vi) at least two sets of barbs with each set having a different barb size, and (vii) combinations thereof.

Applicants' claimed barb configurations for a barbed suture are neither taught nor suggested by references cited by the Examiner, either alone or in any reasonable combination suggested by the prior art. The patents to Buncke and Alcamo each disclose a barbed suture. However, neither patent discloses the claimed barb configurations of the Markush group. Since the cited references fail to show each and every element of the presently claimed invention, Applicants respectfully submit that claim 23 defines a novel barbed suture and surgical needle combination which is not fairly suggested by the references.

Claims 24-31 of the present application all depend from claim 23 and, therefore, distinguish over the references for the reasons discussed above with respect to claim 23.

Similarly, new claims 91, 100, 109, 118, 127 and 134 express the members of the Markush group of claim 23 as independent claims. These new claims, along with the claims dependent therefrom, also distinguish over the references for the reasons discussed above with respect to claim 23.

New claims 55-72 and 79-90 depend from allowed claims 17, 18, 21, 34 and 35, and should be allowable.

For the foregoing reasons, the Applicant respectfully submits that the barbed suture and surgical needle combination claimed in the present application is not anticipated nor fairly taught or suggested by any of the cited references. Reconsideration and withdrawal of the rejections and allowance of claims 24-31 and 55-140 at an early date are respectfully requested.

If the Examiner has any questions about the present Amendment or anticipates finally

rejecting any claim of the present application, a telephone interview is requested.

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Respectfully submitted,

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